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### REMARKS

Claims 1-6 and 22-27 have been canceled without prejudice or disclaimer. Claims 28-49 have been added and therefore are pending in the present application. Claims 28-49 are supported throughout the specification, including the originally-filed claims.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

#### I. The Objection to the Specification

The Office objected to the specification because of the use of trademarks. All of the trademarks recited in the specification are identified by the "TM" or "®" symbols. Applicants therefore have respected the proprietary nature of the trademarks and therefore submit that this objection has been overcome.

#### II. The Rejection of Claims 5, 6, 23, 24, 26, and 27 under 35 U.S.C. 112

Claims 5, 6, 23, 24, 26 and 27 are rejected under 35 U.S.C. 112 as being indefinite. Specifically, the Office objected to the use of broad and narrow ranges in the same claim (claims 6, 23, and 26), the use of the term "derived from" (claim 6), the use of the phrase "sequence shown in SEQ ID NO: 4" (claim 6), and the use of the term "total enzyme protein" (claims 24 and 27).

Claims 1-27 have been rewritten as claims 28-49 to address this rejection. Applicants therefore submit that this rejection has been overcome.

#### III. The Rejection of Claims 2 and 3 under 35 U.S.C. 112

Claims 2 and 3 are rejected under 35 U.S.C. 112 as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. This rejection is respectfully traversed.

It is well settled that "[t]he test for determining compliance with the written description requirement is whether the disclosure of the application as originally filed reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter ..." *In re Kaslow*, 217 USPQ 1089, 1096 (Fed. Cir. 1983).

As set forth in Federal Circuit decisions, a specification complies with the written description requirement if it provides "a precise definition, such as by structure, formula, chemical name, or physical properties of the claimed subject matter sufficient to distinguish it from other materials." See, e.g., *University of California v. Eli Lilly and Co.*, 43 U.S.P.Q.2d 1398, 1404 (Fed. Cir. 1997); *Enzo Biochem v. Gen-Probe Inc.*, 63 U.S.P.Q.2d 1609, 1613 (Fed. Cir. 2002). In fact, "[a] description of a genus of cDNAs may be achieved by means of a recitation of a representative number of cDNAs, defined by nucleotide sequence, falling within the scope of the genus or of a recitation of structural features common to the members of the genus, which features constitute a substantial portion of the genus." *Eli Lilly and Co.*, 43 U.S.P.Q.2d at 1569.

Applicants submit that the specification complies with the written description requirement.

Applicants' claimed inventions are directed to (1) detergent compositions comprising a fungal cellulase and an endoglucanase having a sequence of at least 90% identity to the amino acid sequence of position 1 to position 773 of SEQ ID NO: 2 or is a fragment of the amino acid sequence of position 1 to position 773 of SEQ ID NO: 2 that has glucanase activity and (2) detergent compositions comprising an anti-redeposition endoglucanase and a cellulase.

Cellulases, in particular fungal cellulases, for use in the detergent compositions of the present invention are described in the specification and are well known in the art. See, e.g., U.S. Patent Nos. 5,648,263 and 6,107,265. Moreover, the endoglucanases are defined by a precise definition, namely by structure – 90% identity to the amino acid sequence of position 1 to position 773 of SEQ ID NO: 2 or a fragment thereof. The specification also describes tests for determining if an endoglucanase is an anti-redeposition endoglucanase. Applicants submit that based on the general knowledge available in the art and the information provided in the specification, the disclosure of the application as originally filed reasonably conveys to the skilled artisan that the inventor had possession of the claimed subject matter.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

#### **IV. The Rejection of Claims 1-6 and 22-27 under 35 U.S.C. 112**

Claims 1-6 and 22-27 are rejected under 35 U.S.C. 112 for failing to comply with the enablement requirement. This rejection is respectfully traversed.

It is well settled that an assertion by the Patent Office that the enabling disclosure is not commensurate in scope with the protection sought must be supported by evidence or reasoning substantiating the doubts so expressed. *In re Dinh-Nguyen*, 181 U.S.P.Q. 46 (C.C.P.A. 1974).

See also *U.S. v. Telectronics*, 8 U.S.P.Q.2d 1217 (Fed. Cir. 1988); *In re Bowen*, 181 U.S.P.Q. 48 (C.C.P.A. 1974); *Ex parte Hitzeman*, 9 U.S.P.Q.2d 1821 (BPAI 1988).

Moreover, in the absence of any evidence or apparent reason why compounds do not possess the disclosed utility, the allegation of utility in the specification must be accepted as correct. *In re Kamal*, 158 U.S.P.Q. 320 (C.C.P.A. 1968). See also *In re Stark*, 172 U.S.P.Q. 402, 406 n. 4 (C.C.P.A. 1972) (the burden is upon the Patent Office to set forth reasonable grounds in support of its contention that a claim reads on inoperable subject matter).

Applicants submit that the specification complies with the enablement requirement.

The claimed inventions are drawn to detergent compositions comprising an endoglucanase and a cellulase. As described above, cellulases such as endoglucanases are well known in the art. Moreover, the specification contains an extensive disclosure of techniques which are well known in the art and indeed routine for persons of ordinary skill in the art for identifying other cellulases and endoglucanases for use in the present invention.

We draw the Examiner's attention to *In re Angstadt*, 190 U.S.P.Q. 214 (C.C.P.A. 1976). In *Angstadt*, the claimed process of preparing hydroperoxides used a metal salt complex as a catalyst. The specification disclosed catalysts that worked and some that gave little or no yield of hydroperoxides. The claims were rejected for lack of enablement, specifically as requiring undue experimentation to find useful catalysts. This rejection was reversed by the CCPA.

In holding that the claims did satisfy 35 USC 112, the Court observed, 190 U.S.P.Q. at 218:

We cannot agree with the board that appellants' disclosure is not sufficient to enable one of ordinary skill in the art to practice the invention without undue experimentation. We note that many chemical processes, and catalytic processes particularly, are unpredictable, [citation omitted] and that the scope of enablement varies inversely with the degree of unpredictability involved, [citation omitted]. That this particular process is unpredictable is demonstrated further by appellants in their specification. Appellants have disclosed forty examples; one of these examples yields no hydroperoxides in the final product. Also, appellants have expressly indicated in their specification that some of these organometallic complex catalysts 'yield \*\*\* no hydroperoxides in the final product.'

Appellants have apparently not disclosed every catalyst which will work; they have apparently not disclosed every catalyst which will not work. The question, then, is whether in an unpredictable art, section 112 requires disclosure of a test with every species covered by a claim. To require such a complete disclosure would apparently necessitate a patent application or applications with 'thousands' of catalysts along with information as to whether each exhibits catalytic behavior resulting in the production of hydroperoxides. More importantly, such a requirement would force an inventor seeking adequate patent protection to carry

out a prohibitive number of actual experiments. This would tend to discourage inventors from filing patent applications in an unpredictable area since the patent claims would have to be limited to those embodiments which are expressly disclosed. A potential infringer could readily avoid 'literal' infringement of such claims by merely finding another analogous catalyst complex which could be used in 'forming hydroperoxides.'

This admonition applies with equal force to the present application. To require more would fly in the face of the *Angstadt* holding.

The Court, 190 USPQ at 218, recognized that some experimentation might be necessary for the skilled worker to select non-exemplified catalysts for use:

Appellants have, in effect, provided those skilled in this art with a large but finite list of transition metal salts from which to choose in preparing such a complex catalyst. Appellants have actually carried out 40 runs using various transition metal salts and hexaalkylphosphoramides. If one skilled in this art wished to make and use a transition metal salt other than those disclosed in appellants' 40 runs, he would merely read appellants' specification for directions how to make and use the catalyst complex to oxidize the alkylaromatic hydrocarbons, and could then determine whether hydroperoxides are, in fact, formed. The process discovered by appellants is not complicated, and there is no indication that special equipment or unusual reaction conditions must be provided when practicing the invention. One skilled in this art would merely have to substitute the correct mass of a transition metal salt for the transition metal salts disclosed in appellants' 40 runs. Thus, we have no basis for concluding that persons skilled in this art, armed with the specification and its 40 working examples, would not easily be able to determine which catalyst complexes within the scope of the claims work to produce hydroperoxides and which do not.

However, while some experimentation might be necessary, as long as the experimentation was not "undue experimentation," the claims would not violate 35 USC 112, *Angstadt*, Id:

Since appellants have supplied the list of catalysts and have taught how to make and how to use them, we believe that the experimentation required to determine which catalysts will produce hydroperoxides would not be undue and certainly would not 'require ingenuity beyond that to be expected of one of ordinary skill in the art.' (Emphasis added).

As in *Angstadt*, the present application identifies fungal cellulases and endoglucanases for use in the present invention. While some experimentation might be necessary to identify other non-exemplified fungal cellulases and endoglucanases, such experimentation would require carrying out a simple process without special equipment or unusual reaction conditions,

as in *Angstadt*. This experimentation, if required, "would not be undue and certainly would not require ingenuity beyond that expected of one of ordinary skill in the art." (*Angstadt*, 190 U.S.P.Q. at 218). Certainly, there is no evidence of record to the contrary.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

**V. The Rejection of Claims 1, 2, 5 and 22-23 under 35 U.S.C. 102**

Claims 1, 2, 5 and 22-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Outtrup et al. (U.S. Patent Application Publication No. US 2005/0215450). Claims 1, 2, 5 and 22-23 have been canceled without prejudice or disclaimer. Therefore, this rejection is rendered moot.

**VI. The Rejection of Claims 1-6 and 22-27 under 35 U.S.C. 103**

Claims 1-6 and 22-27 are rejected under 35 U.S.C. 103 as being unpatentable in view of Outtrup et al. in view of Hakamada et al. (Biosci. Biotechnol. Biochem., 2000, 64(11): 2281-2289), Lund et al. (U.S. Patent No. 5,958,082), Schulein et al. (U.S. Patent No. 6,001,639) and Clarkson et al. (U.S. Patent No. 5,290,474). This rejection is respectfully traversed.

Outtrup et al. is prior art solely under 35 U.S.C. 102(e) and is owned by Novozymes A/S, the owner of the instant application. Thus, under 35 U.S.C. 103(c), Outtrup et al. cannot be used as a reference to reject Applicants' claims under 35 U.S.C. 103. For this reason alone, this rejection should be withdrawn.

Moreover, none of the cited references alone or in combination suggest Applicants' claimed invention.

Outtrup et al. disclose an endoglucanase of SEQ ID NO: 2. However, Outtrup et al. do not teach or suggest the combination with another cellulase for improved washing effect.

Hakamada et al. disclose an alkaline endoglucanase having 98.3% sequence homology to SEQ ID NO: 2 of the current application. However, Hakamada et al. do not teach or suggest the combination with another cellulase for improved washing effect.

Lund et al. and Schulein et al. disclose the cellulase of SEQ ID NO: 4. However, neither reference teaches or suggests the combination with an endoglucanase for improved washing effect. Indeed, Lund et al. expressly state in column 4, line 51 that "Preferably, the cellulolytic enzyme to be used in the present invention is a monocomponent (recombinant) cellulase, i.e. a cellulase essentially free from other proteins or cellulase proteins."

Clarkson et al. disclose a detergent composition containing substantially pure EGIII cellulase, where substantially pure is defined as "a composition of cellulase proteins containing at least 40 weight percent, preferably at least 70 weight percent and most preferably at least 90 weight percent of EG III based on the total weight of cellulase proteins." However, Clarkson et al. also do not teach or suggest the combination of a fungal cellulase and endoglucanase.


For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 103. Applicants respectfully request reconsideration and withdrawal of the rejection.

#### VII. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

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